

All Hands on Deck! Creating a Fleet of Innovators

By Rear Adm. Danelle Barrett

“Hey boss, wanted to run something by you, do you have a minute?” asks Seaman Jones, who is outside your office with her Training Petty Officer and the Chief. Because you have established a reputation as a leader who encourages bringing new ideas forward and acts on them, she wants you to know about a proposal she has to change the way the crew manages training which she thinks could save time and make the training easier for watchstanders to attend in person.

Jones presents a creative, thoughtful proposal, which she collaboratively worked with her peers, and even states that she thought of implications to other departments on the ship and how they could benefit from the same change. You see the merit in it, and ask the Chief and Training Petty Officer for their opinions. They fully support it, so you decide to give it a trial run and implement it in your Division immediately, letting the Seaman, the Training Petty Officer, and Leading Petty Officer manage implementation of the change.



After a false start and a quick course correct, the change takes hold. A before and after survey of the division indicates that it is well received and results in more meaningful training. You take Seaman Jones to the next Planning Board for Training and let her share her idea with the other departments, the board asks a few questions, then the Executive Officer decides to implement the same process throughout the ship, where the change works out in those departments as well.

The Commanding Officer and Command Master Chief publically thank Seaman Jones for making that idea a reality at the next all hands call, highlighting her creative thinking. The CO also passes the proposal along to the Strike Group Training Officer. Seaman Jones' experience, observed by her shipmates, leads to other innovative proposals from the crew, a few which are adopted by the entire Strike Group.

Seaman Jones and others learned that innovation is about process and leadership — it's not a “thing” or the latest whiz-bang technology, although those can certainly contribute to pioneering change. The true benefit in this case was not the change in training, it was about creating and sustaining a culture of innovation and reinforcing that as the normal way business gets done at

the command. For this type of environment to be reality throughout Navy, we need to espouse a few basic tenets:

- Build a culture of innovation from Seaman to Admiral and with our civilian workforce where people feel empowered and want to “own” the idea through to a tangible outcome. Reinforce that environment by encouraging and rewarding creative actions and outcomes not just ideas. Support this culture at all levels of the command.
- At every learning opportunity, teach how to think about the art of the possible and the importance of tenacity, understanding and taking calculated risk — and learning from failure. Do not assume that people will operate this way naturally.
- Promote creative, agile thinkers by recognizing those that meaningfully challenge the status quo, provide creative alternatives, take calculated risks even if they fail, and collaboratively push on through until they achieve improvements. We do not want a risk adverse Navy.
- Make innovation about the process of improved outcomes, not about the distraction of technology. As we deal with the constraints of our national debt, creating and retaining a fleet of innovative thinkers is key to sustaining warfighting supremacy for the United States and our allies.

How We Build and Sustain a Culture of Innovators

The Navy has a long history of innovators from Admirals [Hopper](#), [Rickover](#), and [Burke](#) to our “Seaman Jones” of today. The operational landscape has become exceedingly complex when faced with non-traditional adversaries, transforming strategies, austere budgets, and rapidly advancing technology that provide us and our adversaries with new challenges and ways to maneuver in the battlespace.

These challenges require an all-hands effort to ensure we stay at the forefront of operations and warfighting. By using what we have effectively, we can implement processes to improve speed and the accuracy of decision making and shared situational awareness among our forces and partners. To meet that challenge, we must have a cadre of innovative, agile thinkers.

This does not come naturally in large organizations laden with bureaucratic processes, often restricted by external forces. Change agents will be faced with institutional inertia at best or institutional resistance at worst, but a combination of tenacity, iterative successes, demonstrated leadership support and creative thinking can push through barriers to innovation.

Behavior rewarded is behavior repeated, and the personal satisfaction of seeing your idea supported and implemented is a powerful reward. Accompanying any successful innovation must be systemic processes to reinforce how we value those who truly make changes that matter, small ones at the deckplates or enterprise-wide changes at the highest levels. Awards and public

recognition are noteworthy but promoting collaborative creativity and inventiveness as traits highly valued by selection boards and for advancements will result in more deliberate proliferation of an innovative culture.

New criteria in officers and enlisted fitness reports/evaluations should include grading behaviors that are not normally associated with military conformity such as excelling in the “grey space” and “being comfortable being uncomfortable,” questioning the status quo, accepting calculated risk, interpreting rules differently, being disruptive in a constructive way that leads to positive change, being a catalyst for creativity from others, and exploring areas others think are already well defined. This coupled with more traditional traits we associate with our best leaders, such as being visionary, adaptive, tenacious, resilient, promoting success in others, sharing credit, the ability to manage uncertainty and fear, and connecting the dots between seemingly disparate people, groups and issues, will enable us to recognize and promote our innovators.



Beware the Good Idea Fairy

To achieve those outcomes, our innovators need to be trained to be the innovator-implementer and not just the *Good Idea Fairy*. We've all been in organizations where there is an individual or group of individuals who believe it is their job to simply “think big thoughts” and push those off on to others to do the hard work of turning that vision into reality or at least getting it off to a running start. These folks are not only tiresome, but they often create churn without any outcome that demonstrably improves operations or processes.

The true innovators are the ones that have the idea and push it through to implementation, even through false starts and failures. As any true innovator knows, learning from failure is an important part of the calculus. The innovation-integrator, the one with the idea who sees it through, is the one who deserves support and demonstrates the systemic behavior we want repeated and rewarded.

True innovation is not a solo sport, it is most successful through collaboration. Many great ideas have their genesis in the work of others that sparks the thought, is built upon and improved or applied in a different manner to achieve an improved result. Again, rewarding the team that contributed to the innovative idea and those that enabled its implementation is more important than singling out one individual.

Deckplate to Strategic Innovation

Some people are naturally creative, inquisitive and tend to see the world from outside the box, others may not have been born that way but can be taught to think that way. The diversity of backgrounds in the Navy means that we cannot assume a level playing field when it comes to differing perspectives or the tendency to innovate, but we can assume we can build innovators from the vast talent we have and that their diversity will make for richer contributions.

Getting even the most junior person engaged at every level and teaching them to look at their idea in the context of how it could be applied to another process, situation or operation is the first step in building the innovator who begins to think strategically. It is never too early to start that inculcation. So Seaman Jones, who sees her proposal become a successful, repeatable process in the entire Strike Group, with potential for fleet-wide implementation, uses that lesson to frame her thoughts when she has her next big idea.

Training on how to have an inquisitive mind, questioning the status quo, looking for ways to improve existing operations and processes and effectively implementing change should be basic tenets in every Navy course taught, and integrated in the fabric of the instruction in a way that is interactive and collaborative.

Practical, hands-on experiences and exercises that force people out of their comfort zones, drive collaboration to improve on ideas, and teach people how to calculate risk are critical to building innovators. Success breeds success, so having those who have successfully implemented creative ideas speak and discuss their experiences are important mentoring opportunities that should be used in local wardrooms, goat lockers and at all-hands training events.

These learning opportunities are particularly powerful if the person also transparently shares their challenges and failures, and how they overcame those. Even in existing courses of instruction on what would be considered more mundane topics; there are opportunities to infuse innovation as a way to think about what Sailors are learning and how they will use that knowledge.

For example, if the course is to teach Navy Electronics Technicians how to repair a piece of gear, how do we teach the basic technical fundamentals the Sailor needs but also how to look for ways to improve that gear, get more years of use out of it, potentially use it to support operations in ways it was not intended for originally, identify ways to repair it more quickly or to reduce the amount of time it is out of service.

As leaders, there are several things we can do to reinforce this culture of innovation. First, and foremost, let our subordinates see that we try and fail as well when pursuing new endeavors. Visibly demonstrate resiliency and persistence in pushing through impediments and how we reassess the assumptions we made about the innovation to re-attack or change our plans; being adaptable and nimble are key. We also need to let our subordinates fail and show them how to collectively learn from that to push forward. They will understand through watching more senior leaders and learning the difference between taking reckless risks and calculated risks and that taking calculated risk is not only acceptable but expected.

Secondly, discussions about innovation and change should be part of the day-to-day battle rhythm of the command, ingrained in all process improvement efforts. It is something “baked-in” from the start — not sprinkled on later as an afterthought. Encourage creative dissention with meaningful dialogue in proposing alternatives. Healthy discourse and a shared understanding of how to use creative tension in a good way to enrich collaboration are critical.

Teach subordinates to ensure their position and idea are not wrapped up in egos. Know when to let go in favor of something else or someone else’s idea that’s better and possibly builds off the original idea. It’s not about who gets credit, it’s about results. If the reward structure is right, all will be recognized for their contributions to the end result and the real reward will be support for their next good idea.

Lastly, it is important to also ensure that the realities of innovation are understood. Teaching how to get ideas to outcomes means everyone needs to understand there are constraints (declining budgets, policies, programs of record, etc.) they will have to work with or change to succeed. Bureaucracy should not deter them if the innovation needs to challenge that existing status quo and reform something in the system that inhibits positive change. Sailors need to understand how to navigate those waters successfully to get the idea to fruition. Some of our efforts should be specifically targeted to fixing those processes that currently stifle innovation.

Technology can be a Means to an End, But it is Not the End

Too often today, people equate innovation to a new technology. While technology can be innovative, it is the how technology is used that makes it the game-changer. Additionally, technology as a driver for an innovative idea need not be expensive. Our adversaries are increasingly creative in countering our expensive warfighting technology with low cost alternatives that do not pack the same kinetic punch, but if successful, can be equally effective in disrupting our operations or denying our battlespace supremacy.

Attacks need not be particularly sophisticated to be effective as we have seen in cyber-attacks where basic spear phishing methods are used to deliver malware via email. In that domain, the cost of entry into cyber warfare for our adversaries is low and capability ubiquitously available. Producing well-trained hackers is cheap when compared with the cost of going head-to-head with the United States using traditional warfighting platforms, such as \$13 billion for the latest aircraft carrier and the Joint Strike Fighters estimated at \$80 million apiece. If adversaries can

achieve the effect they want without the investment by being innovative with existing technology and processes, they can effectively achieve a warfighting advantage or deny us one.

We often focus on technology as the means to the end. It certainly can be a contributor, but it is what you do with the technology, the act of being creative with how it changes existing processes or leads to ones not yet in existence, that is the true test of innovation. This is particularly relevant in our gadget-driven society, where the next big thing is often touted as being “the” solution. Absent how existing operations will be improved by the technology, the potential benefits are lost. For example, how many times have we seen organizations implement the latest portal technology only to have workers take the same mountain of questionably useful information from their shared drives and simply move it all to the new system without process changes to advance how they smartly tag, use/reuse, discover, and share that information.

If the outcome is no different, then the technology itself was not the solution. The required process changes needed to leverage the new technology coupled with the marketing campaign to the workforce, their training on how to resourcefully use the new capabilities, and highlighting the success stories of how it improved operations will lead to organizational efficiencies and true innovation.

Being creative with technology we already have is sometimes the best answer. How can we use it in a new way to achieve improved operations? Sometimes a simple solution meets an objective and achieves the desired effect. Walt Disney was known to hire and retain some of the most innovative minds even calling his team "Imagineers." When they built the Haunted Mansion in the 1950s, they decided to use a simple solution for creating the ghostly images within the attraction.

Most of the "ghosts" seen by visitors today on that ride are still created using an old magician's trick of shining light on an object, having that light reflect on a glass which guests see as they ride through the attraction, making the "ghosts" appear transparent. Over 50 years later, and with other more advanced technologies available, this simple method using light still produces the desired effect at a fraction of the cost for more high tech solutions. The same “Imagineering” mindset is what we need espoused throughout the Navy.

You Can Put a Dress on a Pig, But It's Still a Pig

It's important to distinguish true innovation from the merely novel. So you can put a dress on a pig, but it's still a pig. Now if you also teach that pig to sniff out and identify explosives and not just truffles, you may be on to something — dress or not. According to Webster, novelty is “the quality or state of being new, different, and interesting.” But new, different and interesting are not necessarily going to focus improvement on where we need it most and may actually be a distractor or waste of limited resources. It may not improve the status quo or lead to process change that will produce a desired effect. True innovation needs to result in demonstrated improvement or a new way to achieve a desired effect, it implies action and results.

We must also be cautious of that which appears to be innovative but is merely a variation of what already exists and doesn't contribute to a significant warfighting advantage. For example, if we build unmanned /autonomous vehicles to do the same thing that traditional manned warfighting platforms do — just without a human in the vehicle — then is that really innovation? It's interesting and removes the danger of losing a person if it's destroyed, but it's not innovative.

What would be innovative in the case of unmanned aerial vehicles would be to have that platform be part of a squadron assigned to a Strike Group and include the capability to deploy rapidly swappable payloads based on mission requirements, where the Commander could, within minutes, put an intelligence, surveillance and reconnaissance payload on it to rapidly gain shared situational awareness of the battlespace, or to quickly employ a robust communications payload instead if denied access to space-based systems to extend command and control via an aerial layer communications network, or the Commander could rapidly deploy a kinetic weapon payload for traditional strikes.

To design robust capability in all these areas on a single airframe today and have sufficient power and overhead time to be effective would be too expensive to build, and one airframe cannot support all those capabilities simultaneously. To build and sustain single-use different variants to cover each of these capabilities, or ones that do multiple functions but only a fraction of each of those missions, is also inefficient. While not an easy engineering task on how to make payloads rapidly interchangeable, that would be truly innovative and a game-changer for operational Commanders, giving them capability at their fingertips to rapidly respond to a dynamic battlespace.

Maintaining strategic and operational advantages requires us all to innovate. Reuse of existing technology in new ways, improved processes for inventive maneuver of existing forces and employment of capabilities, and creating and sustaining a culture of agile-thinking, smart risk-takers allowed to fail without fear of it ending their career will lead to culture change.

As was the case with Seaman Jones, being an innovator was part of her crew's ethos; an "All Hands on Deck" evolution and simply how they operate and see themselves collectively. This behavior and sense of ownership, when exercised and expected from top leadership down to the deckplate can result in incredibly ground-breaking results. When each person sees themselves as change agents with a voice, encouraged and empowered to make their ideas reality, the Navy will truly have created a Fleet of Innovators.

[Rear Adm. Danelle Barrett](#) is an Information Dominance Corps Officer currently stationed at US Cyber Command where she is the Deputy Director of Current Operations.